KENTUCKY PANDEMIC INFLUENZA PREPAREDNESS PLAN
BASE PLAN

I. INTRODUCTION

Experts say it is not a question of if, but when the next pandemic will occur. The economic costs associated with pandemic influenza are expected to be in the billions of dollars. Estimates of morbidity and mortality will place to a tremendous burden on the Commonwealth's health and medical systems. Health and medical personnel, as well as infrastructure workers, (i.e., law enforcement, fire and public works), will not be immune to the threat of an influenza pandemic. The potential threat of a pandemic can not be taken casually. To prepare for the next pandemic, the Kentucky Department for Public Health (KKDPH), Division of Epidemiology and Health Planning, in cooperation with many state and local organizations and partners, have developed this Kentucky Pandemic Influenza Preparedness Plan which provides strategies to reduce pandemic influenza-related morbidity, mortality, and social disruption in the state.

A. Purpose

The purpose of this plan is to provide a guide for state and local agencies on detecting and responding to an influenza pandemic. The major goals of the plan are to prevent illness and death and preserve critical community infrastructures. The plan describes a command structure and provides guidelines to the state and local health departments on the following issues:

- Laboratory and Surveillance: Supplement I
- Healthcare Planning: Supplement II
- Infection Control: Supplement III
- Clinical Guidelines: Supplement IV
- Vaccine: Supplement V
- Antiviral: Supplement VI
- Community Containment: Supplement VII
- Public Health Communications: Supplement VIII
- Psychosocial Considerations: Supplement IX

If confronted with pandemic influenza, the priorities of KDPH will be to assure the continuation and delivery of essential public health services, while providing assistance to meet emergency needs of the affected population. This plan establishes the framework and guidelines for ensuring that an effective system of health and medically related emergency response is in place to contain adverse outcomes of influenza pandemic.

In the face of a pandemic threat or ongoing nationwide influenza pandemic, the need to vaccinate millions of persons as rapidly and safely as possible will pose a potentially overwhelming burden on the usual sites for annual influenza vaccination. As knowledge and infrastructure change, the plan should be revised accordingly. In addition, in the event of a pandemic, the judgments of leadership, based on the epidemiology of the virus and the extent of population infection, may alter or override anticipated action plans.

The Kentucky Pandemic Influenza Preparedness Plan must be considered a "living document" that will be updated when new information and guidelines from the WHO or CDC are available. At any time during the stages, the activities may be changed or cancelled by KDPH.

B. Influenza Virus

Influenza is a highly contagious illness and can be spread easily from person to person. It is spread through droplet contact from the nose and throat of an infected person during coughing and sneezing. Rapid onset of high fever, chills, sore throat, runny nose, severe headache, nonproductive cough, and intense body aches - followed by extreme fatigue - are signs and symptoms of influenza. The incubation period is from one to five days. Annual seasonal epidemics typically occur from December to April in the continental United States, including Kentucky.

Influenza A and B are the two types of influenza viruses that cause epidemic human disease. Influenza A viruses are further categorized into subtypes on the basis of two surface antigens: hemagglutinin and neuraminidase. Influenza B viruses are not categorized into subtypes. Influenza A viruses are unique because they can infect both humans and animals and are usually associated with more severe illness than type B influenza viruses.

Antigenic drift and *shift* are the terms used to describe how influenza viruses mutate. *Antigenic drift* is a minor change caused by mutation that results in the emergence of a new strain within a subtype. Antigenic drift has been responsible for heavier-than-normal influenza seasons in the past, like the outbreak of influenza A Fujian (H3N2) in the 2003 – 2004 influenza season. Drifts can occur in both type A and B influenza viruses. *Antigenic shift* is associated with influenza pandemics. It is a major change caused by genetic recombination that results in the emergence of a novel virus strain that has not previously infected humans. Only in influenza type A viruses does antigenic shift occur. As an example, H3N2 and H5N1 can form H5N2

C. Background

The devastation that could accompany an influenza pandemic is not reflected in the public's perception of the annual flu season, despite the fact that influenza causes significant morbidity and mortality each year. In 1918, the public shared today's casual view of the virus. Influenza was, as recorded by A.W. Crosby in Influenza 1918, The American Experience, "a homey, familiar kind of illness, two or three days in bed, a week of feeling shaky, and then back to normal." Thus, the rapid and gruesome deaths that occurred during the 1918 pandemic were shocking to both physicians and the public.

A local historian from a small town in southern Ohio put the potential impact of a major shift in viral sub-types into perspective when he recalled the influence of the 1918 pandemic on his community. The town was located near a military encampment. The historian recalled how the young soldiers would arrive at the camp in the morning healthy and well and, within twenty-four hours, be dead. The dead were so numerous, the community's funeral parlors were overcome and makeshift morgues were located throughout the community. The infamous "Spanish Flu" of 1918 was responsible for more than an estimated 20 million deaths worldwide and at least a 500,000 deaths in the United States.

The mortality rates from the pandemics of 1957 and 1968 were lower due in part to less virulent viruses, antibiotic treatment of secondary infections and improved supportive care. Significant

societal changes have occurred since 1968, making it difficult to predict the level of illness and disruption that an influenza pandemic could cause today. Increased international travel, a larger cohort of persons over 65 years of age, and a larger number of persons with immunosuppressive conditions contribute to the predicted difficulty.

The following estimates of the impact of a pandemic on Kentucky's population and health resources have been made using the CDC FluAid software application. The software permits the planner to alter variables to reflect on different, possible scenarios. The jurisdiction's population and health status characteristics are two variables that may be manipulated.

D. Planning Assumptions

In order to perform preparedness planning for a pandemic, certain assumptions need to be made regarding the evolution and impacts of a pandemic. Determining the potential impact of a pandemic is difficult, but studying pandemics in the past can be useful to help with future predictions. In the 20th century, all pandemics had similar characteristics. For example, each one had about 30% of the U.S. population develop the illness, with about half of those seeking medical care. The highest rates of illness have been in children. School-age children, however, have not had the highest rates of death and severe disease. Virtually all communities experienced outbreaks and rapid geographical spread in each pandemic. The following are national pandemic planning assumptions:

- Susceptibility to the pandemic influenza subtype will be universal.
- The clinical disease attack rate will be 30% in the overall population. Illness rates will be highest among school-aged children (about 40%) and decline with age. Among working adults, an average of 20% will become ill during a community outbreak.
- Of those who become ill with influenza, 50% will seek outpatient medical care.
- The number of hospitalizations and deaths will depend on the virulence of the pandemic virus. Estimates differ about 10-fold between more and less severe scenarios. Because the virulence of the influenza virus that causes the next pandemic cannot be predicted, two scenarios are presented based on extrapolation of past pandemic experience (Table 1).

Table 1. Number of Episodes of Illness, Healthcare Utilization, and Death Associated with Moderate and Severe Pandemic Influenza Scenarios in the United States*

Characteristic	Moderate (1958/68-like)	Severe (1918-like)
Illness	90 million (30%) of population	90 million (30%)
Outpatient medical care	45 million (50%) of those ill	45 million (50%)
Hospitalization	865,000	9,900,000
ICU care	128,750	1,485,000
Mechanical ventilation	64,875	742,500
Deaths	209,000	1,903,000

* Estimates based on extrapolation from past pandemics in the United States. Note that these estimates do not include the potential impact of interventions not available during the 20th century pandemics.

- Risk groups for severe and fatal infections cannot be predicted with certainty. During annual fall and winter influenza season, infants and the elderly, persons with chronic illnesses and pregnant women are usually at higher risk of complications from influenza infections. In contrast, in the 1918 pandemic, most deaths occurred among young, previously healthy adults.
- The typical incubation period (the time between acquiring the infection until becoming ill), for influenza averages 2 days. We assume this would be the same for a novel strain that is transmitted between people by respiratory secretions.
- Persons who become ill may shed virus and can transmit infection for one-half to one day before the onset of illness. Viral shedding and the risk for transmission will be greatest during the first 2 days of illness. Children will shed the greatest amount of virus and, therefore, are likely to pose the greatest risk for transmission.
- On average about 2 secondary infections will occur as a result of transmission from someone who is ill. Some estimates from past pandemics have been higher, with up to about 3 secondary infections per primary case.
- In an affected community, a pandemic outbreak will last about 6 to 8 weeks. At least two pandemic disease waves are likely and may occur over different influenza seasons. Following the pandemic, the new viral subtype is likely to continue circulating and to contribute to seasonal influenza.

- The seasonality of a pandemic cannot be predicted with certainty. The largest waves in the U.S. during 20th century pandemics occurred in the fall and winter. Experience from the 1957 pandemic may be instructive in that the first U.S. cases occurred in June, but no community outbreaks occurred until August. The first wave of illness peaked in October.

Other planning assumptions include:

- A pandemic is inevitable and will impact all states and regions.
- Vaccine safety is important, but also important is speed and efficiency in administering vaccine.
- The general public will be involved, concerned and desirous to receive information. Those responsible must clearly communicate the facts, risks and necessary protection steps to the public.
- It is difficult to perceive any aspect of society that will not be affected by a pandemic of even minor severity.
- Volunteers, especially health and medical volunteers, will be available and able to be utilized.
- Antiviral agents are likely to only be available for limited distribution.
- Vaccine may not be available for some time.

A summary of pandemic influenza morbidity and mortality data for Kentucky (as created by Flu Aid) is as follows:

E. Basis of Estimates:

- Gross Attack Rates – 15%, 25% and 35%
- High risk percentages by age category:
  - 0-18 years of age; 6.4% of the population
  - 19-64 years of age; 17.0% of the population
  - 65+ years of age; 47.0% of the population
- Hospitalization rates are equal to the software's default percentages for high risk and non-high risk populations.
- Inter-pandemic deaths attributed to influenza and pneumonia are 1,030 persons (taken from state surveillance data for the calendar year 2003).

Deaths: (Most Likely)

Attack rate	15%	25%	35%
Gross number deaths	1842	3069	4296
Inter-pandemic "base"	834	834	834
Incremental deaths due to pandemic	1008	2235	3462

Deaths: (Maximum)

Attack rate	15%	25%	35%
Gross number deaths	3103	5172	7241
Inter-pandemic "base"	834	834	834
Incremental deaths due to pandemic	2269	4338	6407

Hospitalizations: (Most Likely)

Attack rate	15%	25%	35%
Number of hospitalizations	7233	12055	16878
Average length of stay per hospitalization	6 days	6 days	6 days
Total patient days	43398	72330	101268
Pandemic period	8 weeks	8 weeks	8 weeks
Average daily census	775	1292	1808

Hospitalizations: (Maximum)

Attack rate	15%	25%	35%
Number of hospitalizations	9483	15807	22130
Average length of stay per hospitalization	6 days	6 days	6 days
Total patient days	58698	94842	132780
Pandemic period	8 weeks	8 weeks	8 weeks
Average daily census	1048	1694	2371

II. COMMAND AND MANAGEMENT

The HHS Pandemic Influenza Plan clearly states the roles and responsibilities of HHS agencies and offices and gives HHS Actions for Pandemic Influenza Preparedness and Response. KDPH will lead the state response to pandemic influenza. It is imperative that both state and local health departments know their role in response to pandemic influenza. This section lays out major roles of federal, state and local health during the Interpandemic, Pandemic Alert and Pandemic Periods.

A. Major Roles of HHS

Interpandemic and Pandemic Alert Period:

- Expand the supply of antiviral drugs by stimulating increased U.S.-based production capacity
- Expand U.S.-based production capacity for pandemic vaccine and work with manufacturers to ensure that pandemic vaccine is produced at full capacity

Pandemic Period:

- Provide ongoing information from the national influenza surveillance system on impact of the pandemic on health and healthcare system
- Assist in conducting outbreak investigations, as requested by state
- Conduct epidemiological and laboratory-based studies ("special studies"), as requested
- Distribute public stocks of vaccines, when they become available
- Provide guidance on community containment strategies, including travel restrictions, school closings, and quarantine and isolation
- Communicate with the public via the news media
- Monitor the response
- Distribute public stocks of antiviral drugs and other medical supplies from the Strategic National Stockpile (SNS) to the states

B. Major Roles of the KDPH

Interpandemic and Pandemic Alert Period

- The KDPH will have responsibility for implementation of the Kentucky Pandemic Influenza Preparedness Plan.
- Enhance disease surveillance to ensure early detection of the first cases in the state
- Coordinate storage and distribution of antivirals
- Coordinate with local health departments for local pandemic influenza planning
- Coordinate with partners agencies on pandemic plans
- Enhance laboratory capacity

Pandemic Period

- The Commissioner of Public Health (State Health Officer) will have primary authority for implementation of the pandemic response plan
- Provide guidance on clinical management and infection control
- Provide guidance on disease transmission using a range of containment strategies
- Provide ongoing communication with the public
- Coordinate with partners to provide psychological and social support services to emergency field workers and other responders
- Coordinate antiviral and vaccine distribution

C. Major Roles of Local Health Departments

Interpandemic and Pandemic Alert Periods

- Identify administrative and medical decision makers during the pandemic
- Coordinate with school board on school closure
- Develop a local pandemic influenza preparedness plan that correlates with existing emergency plans
- Meet with local stakeholders and review major elements of the local pandemic influenza plan
- Decide when the pandemic plan is implemented and assure local emergency plans are implemented during the influenza pandemic
- Develop and implement a local mass vaccination and/or distribution plan

- Develop a plan to close businesses and other public events, if necessary
- Collaborate with the local school board for closing and re-opening of school.
- Develop a plan to educate the public prior to the onset of the pandemic. Identify administrative and medical decicion makers during the pandemic Pandemic Alert Period

Pandemic Period

- Enhance disease surveillance to ensure early detection of the first cases of pandemic influenza in the county or district
- Distribute antiviral drugs and vaccines and communicate with HRSA planning partners on clinical management and infection control
- Prevent local disease tranmission using a range of containment strategies
- Provide ongoing communication with the public
- Coordinate with psychological and social support servics to provide assistance to field workers.
- Communicate on a timely basis the status of county to KDPH.

D. KDPH Command and Control

1. Interpandemic Period and Pandemic Alert Period

Phases 1-2 ***Phases 3-5***

- The ESF 8 DOC Manager will convene a Pandemic Influenza Planning and Management Team to develop a Pandemic Influenza Preparedness Plan for Kentucky. (Note: This document is a product of this activity).
- The members of the Pandemic Influenza Planning and Management Team will assist on issues related to their specific areas of expertise for implementation of the state's public health response to pandemic influenza. Members of the Pandemic Influenza Planning and Management Team include:

From CHFS:	**Other Agencies:**
Director of Division of Epidemiology and Health Planning	**KY Dept. of Education**
Preparedness Branch (9)	**KYEM (2)**
Vital Statistics (2)	**KOHS**
Communicable Disease Branch (5)	**US Army (Fort Campbell)**
Division of Communications	**University of Kentucky**
CDC Field Epidemiologist	**University of Louisville**
Response	**Lexington Metropolitan Medical System (MMRS)**
State Public Health Veterinarian	**Louisville MMRS**
Immunization Branch (3)	**Northern KY MMRS**
Local Health Department Operations	**Local Health Department (3)**
Division of Laboratory Services (3)	**DOCJT**
Office of Information Technology	**Justice Cabinet**
Public Health Protection and Safety	**State Representative**
CHFS General Counsel	**KCCRB**
Office of Information Technology	**Chamber of Commerce**
Office of Aging	**Coroner's Association**

- Responsibilities of the Pandemic Influenza Planning and Management Team include:
  - Developing the CHFS response to pandemic influenza
  - Providing guidance and support to local health departments to prepare for an influenza pandemic
  - Assisting with KDPH response by serving in the incident command structure
- The Pandemic Influenza Planning and Management Team will review the Kentucky Pandemic Influenza Plan at least annually and update the document as needed. The Planning Coordinator from the Public Health Preparedness Branch will be responsible for reviewing and updating the document.
- The Planning and Management Team is working during Interpandemic to:
  - Help promote county and/or regional planning
  - Help promote planning within HRSA regions
  - Identify state and local law enforcement personnel who will assist in maintaining public order and enforcing control measures during a pandemic
  - Make planning decisions on acquisition and distribution of antiviral drugs and vaccines
  - Conduct state-level table top exercises
  - Encourage local jurisdictions to conduct exercises and drills

2. Pandemic Period

Phase 6

Executive Level

- In the event of the occurrence or threatened or impending occurrence of any of the situations or events contemplated by KRS 39A.010, the Governor may declare, in writing, that a state of emergency exists. Conditions enumerated in KRS 39A.010 include "threats to public safety and health."
- The Cabinet Secretary will advise the Governor on pandemic influenza issues.
- In consultation with Kentucky Emergency Management (KYEM), the State Health Officer will help determine the need for activation and, if activated, when closure of the state Emergency Operations Center (EOC) is appropriate. Full or partial activation of the State EOC will be discussed.
- The State Health Officer will determine when to advise the CHFS Secretary to recommend the Governor declare a "State of Emergency in Kentucky" in response to the influenza pandemic
- The State Health Officer or designee will act as an advisor and will collaborate with Emergency Management set the incident objectives, strategies, and priorities and has overall responsibility of the operations.
- The State Health Officer will ensure continuity of critical operations (COOP) for public health.

Command Staff

- General Counsel will be responsible to provide legal advice to Cabinet Secretary and State Health Officer
- The Public Information Officer (PIO) is responsible to disseminate information to the public in a timely manner and participate in the Joint Information System (JIS). It may be necessary to send an additional PIO to serve at the Joint Information Center (JIC).

- The State Epidemiologist reports to the State Health Officer regarding the state's public health response to pandemic influenza and will make recommendations based on epidemiology and communicate up and down the chain of command. The State Epidemiologist will oversee the operations level and communicate directly with the ESF 8 DOC Manager.
- The Cabinet Liaison will work with other agencies and will likely serve as the state Emergency Operations Center.

Operations Level

- The ESF-8 DOC Manager will meet with response team members as often as needed to guide the implementation of Kentucky's pandemic influenza response. The ESF 8 DOC Manager will oversee all section chiefs. Responsibilities of the ESF 8 DOC Manager include:
  - Update the State Epidemiologist and oversee operations, planning, logistics and administration.
  - Conduct briefings on a regular basis with CHFS leadership and staff
  - Oversee the Operations Section and monitor the state's daily response to situation
  - Oversee the Planning Section
  - Oversee Logistics Section
  - Oversee the Finance/Administration Section
- . The following section chiefs will be assigned to coordinate activities:

  Planning Section Chief – Major responsibilities include:
  - Gather, analyze and disseminate intelligence and information
  - Managing the planning process
  - Decide on the benefit using of alternate facilities during the influenza pandemic will and arrange for additional facilities to use for the pandemic response
  - Compile the Incident Action Plan and recommending objectives
  - Develop a written Action Plan/Situation Status, if necessary.
  - Track daily activities for KDPH
  - Track and receiving updates from the Regional Epidemiologists, Planners, Regional HRSA Coordinators and keeping the ESF 8 DOC Manager informed of the pandemic response
  - Communicate with other Divisions within the KDPH as needed regarding the status of the influenza pandemic and the KDPH response
  - Work closely with the ESF 8 DOC Manager, so that information is shared effectively and results in an efficient planning process.

  Operations Section Chief – Major responsibilities include:
  - Develop and implement strategies and tactics to carry out the incident objectives
  - Organize, assign and supervise resources for operations
  - Work closely with the ESF 8 DOC Manager and PIO to be sure that information is shared effectively and results in an efficient process
  - With guidance from the ESF 8 DOC Manager, ensure that public messages are communicated
  - Coordinate KDPH response activities with those of the local health department
  - Responsible for communicating need for reassigned KDPH employees to Admin/Finance Section Chief

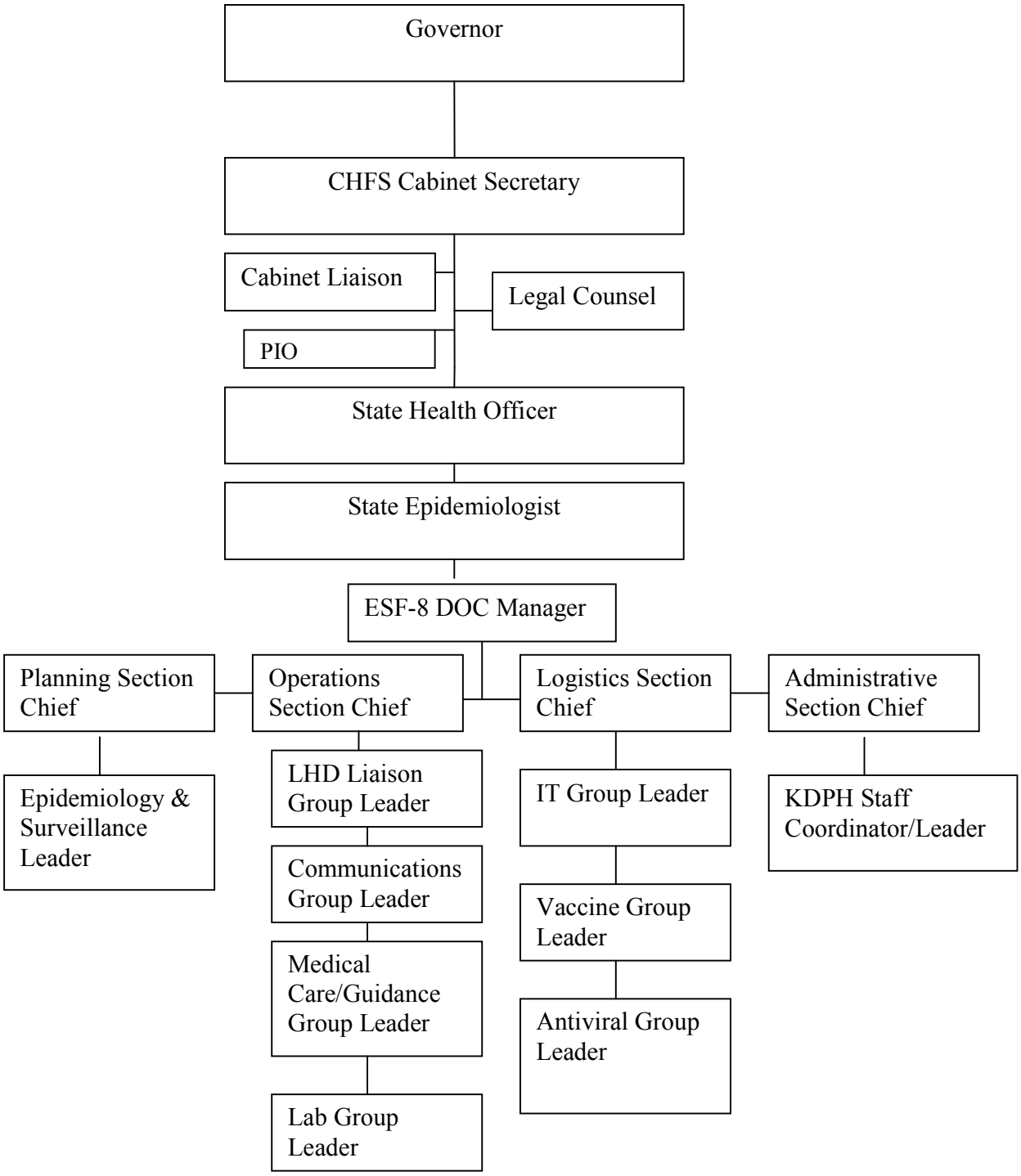
Logistics Section Chief – Major responsibilities include:

- Provide support, resources and all other services needed to meet the operational objectives
- Obtain, maintain, and account for essential personnel, equipment, and supplies
- Track supply, storage and movement of antivirals and vaccines
- Work closely with the ESF 8 DOC Manager to be sure that information is shared effectively and results in an efficient process.

Administrative/Finance Section Chief - Major responsibilities include:

- Monitor the assigned responsibilities of staff
- Serve as liaison with the State Health Officer, the Secretary of the CHFS and the Director of Public Affairs, CHFS
- Provide administrative support during the pandemic response
- Coordinate program support during the pandemic response
- Assess the availability of KDPH personnel available to assist in the pandemic response, upon recommendation from Operations Section Chief
- Contact other Divisions within the KDPH for assistance, as necessary
- All Divisions within the KDPH may assume a supportive role, working within the ESF-8 DOC in ways appropriate to their program authority and responsibilities.

APPENDIX 1
ICS Organizational Chart for the Cabinet for Health and Family Services

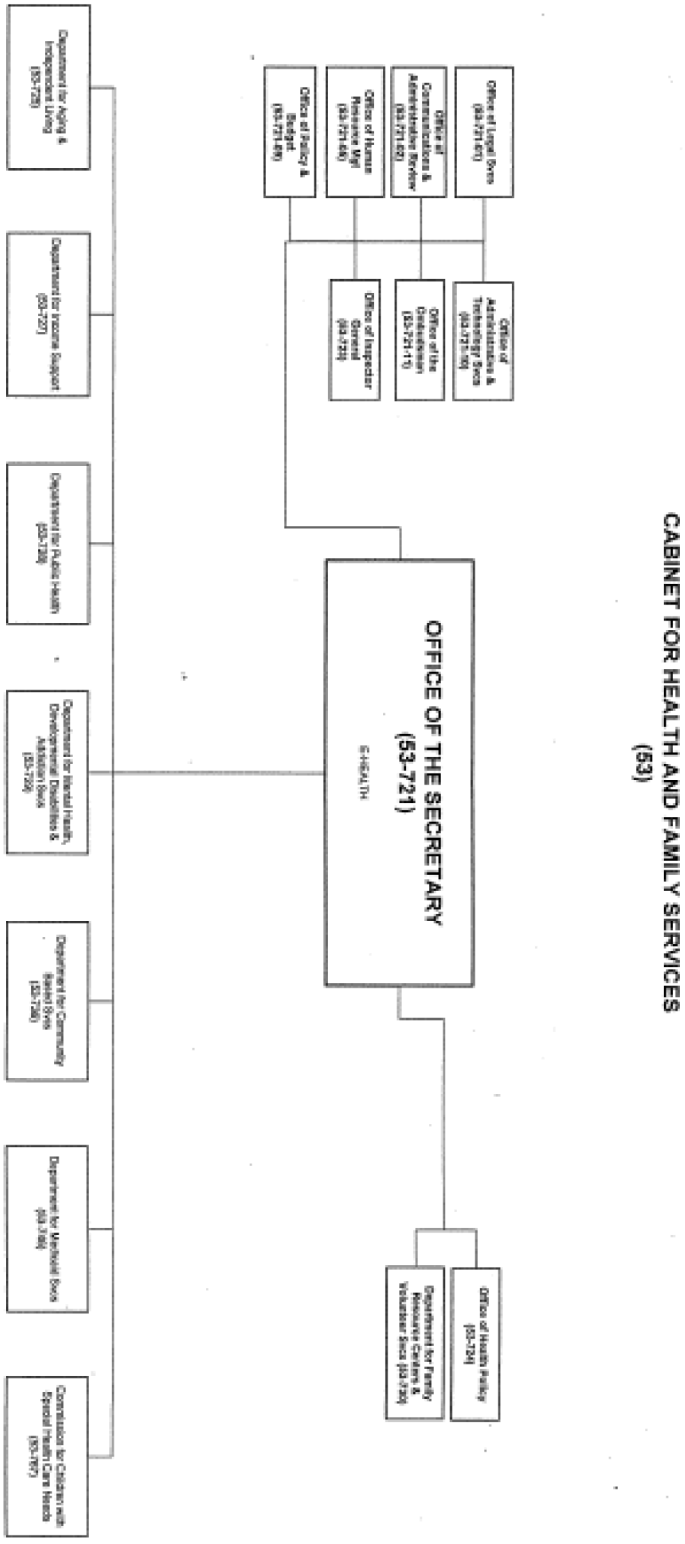


APPENDIX 2
Glossary

Continuity of Operations (COOP)	**Ensures that essential services are prioritized and continue to operate.**
Epidemic	**The occurrence of a disease in a community or region clearly in excess of normal expectations**
Health Alert Network (HAN)	**A program used to communicate health and emergency messages**
Influenza-like illness (ILI)	**The presence of fever $\geq$100° F, with a cough or sore throat**
Joint Information Center (JIC)	**A central location for involved agencies to coordinate public information activities and a forum for news media representatives to receive disaster or emergency information**
Joint Information System (JIS)	**The overall system for public information.**
Novel virus	**A virus rarely, or not previously known to infect humans**
Pandemic	**The occurrence of a disease in excess of normal expectations in extensive regions, countries and continents**
Strategic National Stockpile (SNS)	**A federal cache of medical supplies and equipment to be used in emergency and disaster situations**
Subtype	**Identification of influenza A viruses according to the hemagglutinin (H) and neuraminidase (N) components of the virus, such as H1N1 or H3N2**
Surveillance	**The collection, analysis and dissemination of data**
Syndromic	**Based on clinical signs and symptoms**

Appendix 3

KY Cabinet for Health and Family Services and Department for Public Health Organizational Diagrams



12/07

DEPARTMENT FOR PUBLIC HEALTH

Commissioner: William D. Hacker, MD, FAAP, CPE

Chief of Staff: Charles Kendell, MPA

Commissioner's Office

Deputy Commissioner: Steve Davis, MD
Chief Nursing Officer: Rosie Miklavcic, BSN,

Division of Maternal and Child Health
Ruth Shepherd, MD

Nutrition Services Branch
WIC Program
WIC Food Delivery/Data Section
Clinical Nutrition Section

Maternal and Child Health Branch
Pediatric Section
Oral Health Section

Early Childhood Development Branch
Early Childhood Promotion
Early Intervention Section
Newborn Screening Section

Division of Women's Health
Ruth Shepherd, MD

Abstinence Education and Adolescent Health Program

Breast and Cervical Cancer Screening Program

Breast Cancer Research and Education Trust Fund

Family Planning Program

Preconception Health Program

Division of Prevention and Quality Improvement
Regina Washington, DrPH

Chronic Disease Prevention Branch
Disease Management Section

Public Health Improvement Branch
Quality Improvement Section
Worksite Health Section

Health Care Access Branch

Education and Workforce Development Branch

Health Promotion Branch

Division of Epidemiology and Health Planning
Kraig Humbaugh, MD, MPH

HIV/AIDS Branch
HIV/AIDS Services Section
HIV/AIDS Prevention Section

Infectious Disease Branch (Rob Brawley, MD, MPH)
TB Prevention & Control Section
Immunization Section
STD Prevention and Control Section
Reportable Diseases Section

Vital Statistics Branch

Public Health Preparedness Branch
Community Health Preparedness Section

Healthcare System Preparedness Section

Division of Public Health Protection and Safety
Guy Delius, RS (Acting)

Milk Safety Branch
Milk Safety

Food Safety Branch
Retail Food Section
Food Manufacturing Section

Environmental Management Branch
Facilities Environmental Section
Community Environmental Section

Radiation Health Branch
Radiation Producing Machines Section
Radioactive Material Section
Radiation/Environmental Monitoring Section

Public Safety Branch

Division of Laboratory Services
Stephanie Mayfield, MD

Microbiology Branch
Virology Section
Bacteriology Section

Molecular & Clinical Chemistry Branch
NBS & Metabolic Section
Molecular & Biomedical Engineering Section

Global Preparedness and Environmental Branch
Environmental Section
Preparedness Section

Business Operations Branch
Procurement Section
Customer Service Section

Division of Administration and Financial Management
Melissa Royce

Contracts and Payment Branch
Payment Section
Contract Section

Local Health Operations Branch
Coding and Billing Section

Budget Branch
State Budget Section
Local Health Budget Section

Local Health Personnel Branch
Employee Management Section
Staffing Services Section

Appendix 4

WHO and US Government Pandemic Phases

<table>
<tr><th colspan="2">WHO Phases</th><th colspan="2">Federal Government Response Stages</th></tr>
<tr><td colspan="4">INTER-PANDEMIC PERIOD</td></tr>
<tr><td>1</td><td>No new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused human infection may be present in animals. If present in animals, the risk of human disease is considered to be low.</td><td rowspan="2">0</td><td rowspan="2">New domestic animal outbreak in at-risk country</td></tr>
<tr><td>2</td><td>No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza virus subtype poses a substantial risk of human disease.</td></tr>
<tr><td colspan="4">PANDEMIC ALERT PERIOD</td></tr>
<tr><td rowspan="2">3</td><td rowspan="2">Human infection(s) with a new subtype, but no human-to-human spread, or at most rate instances of spread to a close contact.</td><td>0</td><td>New domestic animal outbreak in at-risk country</td></tr>
<tr><td>1</td><td>Suspected human outbreak overseas</td></tr>
<tr><td>4</td><td>Small cluster(s) with limited human-to-human transmission but spread is highly localized, suggesting that the virus is not well adapted to humans.</td><td rowspan="2">2</td><td rowspan="2">Confirmed human outbreak overseas</td></tr>
<tr><td>5</td><td>Larger cluster(s) but human-to-human spread still localized, suggesting that the virus is becoming increasingly better adapted to humans, but may not yet be fully transmissible (substantial pandemic risk).</td></tr>
<tr><td colspan="4">PANDEMIC PERIOD</td></tr>
<tr><td rowspan="4">6</td><td rowspan="4">Pandemic phase: increased and sustained transmission in general population.</td><td>3</td><td>Widespread human outbreaks in multiple locations overseas</td></tr>
<tr><td>4</td><td>First human case in North America</td></tr>
<tr><td>5</td><td>Spread throughout United States</td></tr>
<tr><td>6</td><td>Recovery and preparation for subsequent waves</td></tr>
</table>